

# WINTERGARDEN CENTRE REDEVELOPMENT

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CHRIS MCCLUSKEY, ISPT DEVELOPMENT DIRECTOR

Left "The 'pièce de résistance' art façade, designed by Studio505 from Melbourne.



Since the Wintergarden Centre was opened 30 years ago, not only has the building code changed but the entire design style of retail in Brisbane has entered a new phase. So the refurbishment of the centre by Brookfield Multiplex for owner, Industry Super Property Trust (ISPT), was not a simple makeover, rather it was a comprehensive two stage process involving a complete overhaul of services, fit out and many of the key architectural features.

Throughout the process, the existing five storey Wintergarden car park and the 26-storey Hilton Hotel on the site remained operational. Adding to the safety and logistical challenges was the project's location, with the busy Queen Street Mall on one frontage, and two one way streets the other direct road access points.

Brookfield Multiplex undertook the project as a design and construct, and aim to achieve 4 Star Green Star for both Design and As Built. The first stage of the project commenced in January 2010, and reached completion in May 2011. Stage two overlapped, commencing in January 2011 and reaching practical completion in April 2012.

"The constraints on the project were considerable," said Brookfield Multiplex Project Manager, Matt Kingstone.

"There were very demanding logistics. There was basement access, and we had one of our tower cranes on level 8 of the carpark, which did lifts in through a void. We also set up a

construction zone on the Hilton Porte cochere, and gave them a new turning zone.

"Everything which has been constructed remained within the existing building envelope. The Wintergarden had very poor physical and visual access from Queen Street, now there are ramps up to the Lower Ground and Ground floors. The flagship tenancy shopfronts now stretch out to the boundary, they have double voids making them big spaces, and there is much more light and space throughout the whole centre.

"Our architects, The Buchan Group, have created a theme of a fractal pattern in the wall claddings, ceilings and tiles, which goes throughout the seating in the food court, everywhere throughout the centre; there are a lot of non-linear shapes.

"The 'pièce de résistance' is the art façade, designed by Studio505 from Melbourne. We awarded this work as a D&C package to Urban Art Projects, who in turn engaged Studio 505 as their own consultant. UAP had the façade panels manufactured in China. The panels in sections, approx 10m high x 2.4m wide and weighing up to 3 tonnes each, were all wrapped and shipped from China, to then be assembled and have their lights installed, in Brisbane.

"The art façade is a 3D depiction of a 'winter's garden', and combines laser cut and bent stainless steel and 16 different colours of powder coated aluminium fixed over a structural steel grillage. There are nearly 24,000 LED lights, which will act like a low resolution video screen and show images of fish, birds, snow falling, wind blowing and other effects. A lot of the stainless steel is bent and shaped to look like leaves on a tree and the butterflies are also 3D with their wings pointing out off the façade at different angles. There is also a smaller art façade over the Edward St elevation and one installed over Elizabeth St."

Green initiatives in the project include the sustainable use of steel, timber and PVC throughout, and water-saving measures, which included the installation of high efficiency air cooled chillers instead of a water tower for the ventilation and air conditioning system.

Not only will this save water, but it will also eliminate the risk of legionnaire's disease or other potential threats to public wellbeing.

Other measures to ensure a healthy indoor environment include low chemical use in finishes and adhesives, and extensive natural lighting combined with energy efficient lighting. The clean, green environmental measures continue into the carpark, with the installation of mixed mode car park ventilation.

Wintergarden also now has an integrated operation for waste management, which includes waste produced by the restaurant and food court tenancies. A detailed commissioning and building tuning process was also carried out prior to final completion.

Brookfield Multiplex had a team of over 40 directly employed workers on the project, ranging from the project management team to carpenters and crane crew. The project also utilised the skills and services of over 48 different subcontractors. This unified workforce tackled the complexities so successfully; the project was completed three weeks ahead of the originally contracted date.

Chris McCluskey, Development Director for ISPT comments; "The Wintergarden represents a very important investment to ISPT, as asset owner. Brookfield Multiplex has delivered an outstanding result. By co-locating project offices, ISPT and Brookfield Multiplex ensured good communication existed between the teams and resulted in faster decision making and improved project management."

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Below Civic Glass and Aluminium were responsible for the design, fabrication and installation of awnings and internal balustrades.



Below Beavis and Bartels were responsible for the hydraulics package for the Wintergarden Centre Redevelopment.



Attention to detail and excellence in delivery are clear for all to see in the work Civic Glass and Aluminium have contributed to the redeveloped Wintergarden Centre on Brisbane's Queen Street Mall. Their scope included design, fabrication and installation of awnings, internal balustrades and a stunning glass pedestrian bridge.

Civic is an integrated operation, with in-house drafting, manufacturing and installation teams of qualified glaziers with tickets including working at heights, allowing them to take a flexible approach to meeting the needs of challenging projects such as this one.

The two awnings fabricated for the project are comprised of over 60 separate pieces of SuperClear plexiglass, which is durable and also shatter resistant. The architectural frameless balustrade glass for the centre was custom-cut safety glass, and then installed on site onto stainless steel stanchions. The glass bridge was especially challenging, comprising 50 separate pieces of opaque 40mm geometric glass, with a 1.52mm interlayer, and a 6mm sacrificial top layer, all fabricated to shape and supplied by Viridian, installed by Civic.

Part of the success of the work is due to the experience and commitment of the company's installation team, who worked shifts at all hours when

required. There were two stages, the second stage awning and balustrades over six months, including the installation of the glass bridge. Civic are specialists in supplying glazing solutions for the top end of town, including commercial tower projects and high rise residential developments. Other recent flagship projects have included BNE Common Ground for Grocon; Port Side for Brookfield Multiplex; and Griffith University G52 building for Watpac Specialty Services.

With a stable, experienced workforce of 45 in-house, supplemented by reliable contract installers, and a range of reliable regular suppliers who can meet special needs rapidly when required, Civic are ideally positioned to deliver the highest quality of solutions for all types of glazing and framing, including curtain wall packages, external architectural features, and commercial framing and performance glazing solutions. Civic Glass and Aluminium are National Code Compliant, and are in the process of obtaining third party certification for ISO 9000. Whether a project is striving for the highest possible thermal performance glazing for windows, doors, sunshades or facades, or seeking a stunning expression of design intent in glass and steel, Civic have the skills and the experience to deliver.

For more information contact Civic Glass and Aluminium, phone 07 3442 4999, fax 07 3442 4900, website: [www.civic.com.au](http://www.civic.com.au).

Back when Wintergarden was first built, water-saving and energy-efficiency were usually not part of standard hydraulics design. Beavis and Bartels brought to their design and construct hydraulics package for the retail centre's redevelopment the expertise to bring the project up to current BCA code requirements, and made a significant contribution to the projects Four Star Green Star rating.

The company's team of seven licensed plumbers and gasfitters, plus two apprentices, installed the hot and cold water systems, sanitary plumbing, fire hydrant pumps, and a new integrated trade waste system and gas feeds from a centralised meter room for the food court and restaurants. Some of the sustainability aspects of the hydraulics package include flow efficient, low volume, WELS rated tapware, and metering of all high water usage. Beavis and Bartels undertook a three month design and procurement process, and then a substantial 20-month installation period.

One of the biggest challenges Beavis and Bartels faced was the number of reconfigurations of the design required as hidden issues presented themselves throughout the ongoing replacement of prior existing service systems and pipework. Having over 50 years experience in the plumbing trade proved to be an asset, as familiarity with past practices gave them an edge in designing installation solutions. They also had to maintain a flexible

approach to scheduling their works and the logistics of deliveries, due to the project's constricted access and staged commissioning.

Beavis and Bartels were established in Brisbane in 1954, and are specialists in plumbing and drainage systems and multi-storey hydraulics packages for major commercial, retail, hospitality and industrial projects. The company employs 91 tradespersons, 9 apprentices and 10 support staff, all working under a Quality Policy with a strict Quality Management System and in-house Quality Assurance Manager.

The company's track record includes many projects which required the highest level of professionalism, attention to supply and installation detail, and cost-effective, fit-for-purpose outcomes. These include Gold Coast University Hospital for Lend Lease, Brisbane City Hall for Abigroup, RAAF Amberley for John Holland, Ennogerger Army Base L.E.A.P for Watpac, St Andrew's Hospital for Abigroup and Coronation Drive Office Park for ADCO Constructions.

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Redevelopment, QLD

